1. (Twice Amended) A method for the identification of isolated physiologically active peptides, the method comprising the steps of:

comparing the cDNA sequences of receptor variants of receptors having one or more variants in size, the receptors being receptive of an identical ligand and being products of the same gene, wherein there is a substance or cell present in vivo that acts as an antagonist to the ligand for the receptor or to the cell which expresses the receptor of the ligand;

identifying which cDNA sequence in the larger receptor is missing in the shorter receptor; and

determining the corresponding peptide sequence from the cDNA sequence of the missing region, wherein said peptide sequence of the missing domain has physiological activity as a stand-alone peptide irrespective of its activity as part of a receptor.

2. (Twice Amended) A method of producing isolated physiologically active peptides, wherein the missing region determined by the method of claim 1 is produced.

19. (New) A method for producing isolated physiologically active peptides, said method comprising:

comparing the cDNA sequences of receptor variants of receptors having one or more variants in size, the receptors being receptive of an identical ligand and being products of the same gene, wherein there is a substance or cell present in vivo that acts as an antagonist to the ligand for the receptor or to the cell which expresses the receptor of the ligand;

identifying which cDNA sequence in the larger receptor is missing in the shorter receptor; and

determining the corresponding peptide sequence from the cDNA sequence of the missing region, wherein said peptide sequence of the missing domain has physiological activity as a stand-alone peptide irrespective of its activity as part of a receptor; and

producing a peptide corresponding to the cDNA sequence missing from the shorter receptor.

20. (New) A method of claim 19, wherein a derivative having at least 70% homology to the missing region, is produced, wherein the physiological activity of the derivative is maintained.

21. (New) A method of claim 19, wherein the missing region is synthesized by chemical synthesis.

22. (New) A method of claim 20, wherein the missing region is synthesized by chemical synthesis.

REMARKS

Claims 1-4 and 18 are pending. Claims 19-22 have been added. Favorable reconsideration is respectfully requested.

Claim 1 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner believed that the phrase "functional antagonism" is indefinite. Applicant has amended the claim to state "wherein there is a substance or cell present in vivo that acts as an antagonist to the ligand for the receptor or to the cell which expresses the receptor of the ligand." This language is believed in compliance with 35 U.S.C. § 112 because the language was present and not objected to by the Examiner prior to its substitution with the "functional antagonism" language.

The Examiner also rejected claims 1-4 and 18 under 35 U.S.C. § 112, first paragraph, as containing "subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors , at the time the application was filed, had possession of the claimed invention." The Examiner was of the opinion that the "functional antagonism" language added matter to the claims. The above-identified amendment should obviate this rejection.